

**New Mexico Science Content Standards, Benchmarks, and Performance Standards**

**Strands and Benchmarks**

**Kindergarten – 4th Grade**

**Strand I: Scientific Thinking and Practice**

**Standard I:** Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.

**K-4 Benchmark I:** Use scientific methods to observe, collect, record, analyze, predict, interpret, and determine reasonableness of data.

**Grade                      Performance Standards**

**K**        Use observation and questioning skills in science inquiry (e.g., What happens when something is pushed or pulled?).

Ask and answer questions about surroundings and share findings with classmates.

Record observations and data with pictures, numbers, and/or symbols.

**1**        Make observations, develop simple questions, and make comparisons of familiar situations.

**2**        Conduct simple investigations (e.g., measure the sizes of plants of the same kind that are grown in sunlight and in shade).

Use tools to provide information not directly available through only the senses (e.g., magnifiers, rulers, thermometers).

Follow simple instructions for a scientific investigation.

**3**        Make new observations when discrepancies exist between two descriptions of the same object or phenomenon to improve accuracy.

Collect data in an investigation and analyze those data.

**4**        Collect data in an investigation using multiple techniques, including control groups, and analyze those data to determine what other investigations could be conducted to validate findings.

**Strand I: Scientific Thinking and Practice**

**Standard I:** Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.

**K-4 Benchmark II:** Use scientific thinking and knowledge and communicate findings.

**Grade                      Performance Standards**

**K**        Communicate observations and answer questions about surroundings.

**1**        Know that simple investigations do not always turn out as planned.

**2**        Understand that in doing science it is often helpful to work with a team and share findings.

Make accurate observations and communicate findings about investigations.

Polymer Lab ~ Science on Wheels 2006-2007  
Bradbury Science Museum ~ Los Alamos National Laboratory  
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**3** Understand that predictions are based on observations, measurements, and cause-and-effect relationships.

**Strand II: Content of Science**

**Standard I (Physical Science):** Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.

**K-4 Benchmark I:** Recognize that matter has different forms and properties.

**Grade Performance Standards**

**K** Observe that objects are made of different types of materials (e.g., metal, plastic, cloth, wood).

Observe that different materials have different properties (e.g., color, odor).

**1** Describe simple properties of matter (e.g., hardness, flexibility, transparency).

**2** Observe that properties of substances can change when they are mixed, cooled, or heated (e.g., salt dissolves in water, ice melts).

**4** Know that changes to matter may be chemical or physical and when two or more substances are combined, a new substance may be formed with properties that are different from those of the original substances (e.g., white glue and borax, cornstarch and water, vinegar and baking soda).

## 5th – 8th Grade

**Strand I: Scientific Thinking and Practice**

**Standard I:** Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.

**5-8 Benchmark I:** Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.

**GradePerformance Standards**

**5** Plan and conduct investigations, including formulating testable questions, making systematic observations, developing logical conclusions, and communicating findings.

Use graphic representations (e.g., charts, graphs, tables, labeled diagrams) to present data and produce explanations for investigations.

Describe how credible scientific investigations use reproducible elements including single variables, controls, and appropriate sample sizes to produce valid scientific results.

Communicate the steps and results of a scientific investigation.

**8** Evaluate the accuracy and reproducibility of data and observations.